

Work Order ID 150301

Wednesday, August 24, 2016 11:38:44 AM

150301

Page 1

Item ID: D5238-042

Accept

N900040100

Setup Start

NS1

Revision ID:

Stop

NS2

Item Name: Maintenance Step Assembly

Start Date: 8/22/2016 Start Qty: 2.00

2

Cust Item ID:

Required Date: 8/24/2016 Req'd Qty: 2.00

2

Customer:

Reference:

Approvals: Process Plan: **DAS 21** Date: **AUG 26 2016**

Tooling:

Date:

Run Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D5238	B								
100	Pick Kit	0.00							
100									
Packaging	Memo	0.00							
Packaging									
110		0.00							
110									
Small Fab	Memo	0.07							
Small Fab	Assemble as per Dwg Torque screws up to 15-25 in- lbs								
120	QC5- Inspect part completeness to step on W/O	0.00							
120									
QC	Memo	0.00							
Quality Control									

DAS 6
9-89

OCT 31 2016

2x

DAS 36
9-89
16/10/31

2

DAS 38
9-89

NOV 01 2016

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					

Root Cause				FAULT CATEGORY			
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐		
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐		
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐		
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐		
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐		
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐		
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐		
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐		
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐		
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐		
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____					
Misidentified ☐	Past Due ☐						

150301

Wednesday, August 24, 2016 11:38:44 AM

N900040100

Setup Start *NS1*

Stop *NS2*

?

Cust Item ID:

Start Date: 8/22/2016 **Start Qty:** 2.00

~

Customer:

Required Date: 8/24/2016 **Req'd Qty:** 2.00

Reference:

Run Start *NR1*

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

Stop *NR2*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Identify as per dwg & Stock Location:

0.00

130

0.00

Packaging

Packaging

Memo

2 DAS 6 9-89

NOV 01 2016

DAS
21
9-89

140 QC21- Final Inspection - Work Order Release

0.00

140

0.03

QC

Memo

NOV 02 2016

Quality Control

DAS
21
9-89

NOV 01 2016

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐							
		OTHER : ☐							

Picklist Print

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Page 1

Work Order ID: 150301

150301

Parent Item: D5238-042

D5238-042

Parent Item Name: Maintenance Step Assembly

Start Date: 8/22/2016

Required Date: 8/24/2016

Start Qty: 2.00

Required Qty: 2.00

Comments: IPP REV:A 15.05.21 NEW ISSUE DD VERF:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D2690-6 *D2690-6* Lanyard		Manufactured	No				Each	28.0000	**	4 <u>15784</u>			DAS 6 9-89
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>		OCT 3 1 2016	
				ST009				28					
				144944				1					
				147589				20					
				148328				6					
				148584				1					DAS 6 9-89
D4092-1 *D4092-1* Maintenance Step		Manufactured	No				Each	17.0000	**	4 <u>150849</u>		OCT 3 1 2016	
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				ST450				17					
				141433				1					
				144611				16					
D4093-5 *D4093-5* Bracket		Manufactured	No				Each	10.0000	**	4 <u>150854</u>		OCT 3 1 2016	DAS 6 9-89
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				ST078				10					
				141426				2					
				142819				8					

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step #: _____		QTY Effective : _____				MRB (QSI042) Approval	
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								

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Page 2

Work Order ID: 150301

150301

Parent Item: D5238-042

D5238-042

Parent Item Name: Maintenance Step Assembly

Start Date: 8/22/2016

Required Date: 8/24/2016

Start Qty: 2.00

Required Qty: 2.00

D5237-5 Manufactured No

Each 15.0000 2

D5237-5

Bracket

OCT 31 2016

DAS
6
9-89

Location

Loc Qty

Loc Code

ST451

15

140592

15

Each

15.0000

2

D5237-7 Manufactured No

D5237-7

Bracket

OCT 31 2016

DAS
6
9-89

Location

Loc Qty

Loc Code

ST451

15

140591

15

Each

5.0000

4

MS17984-C410 Purchased No

MS17984-C410

QUICK PIN REPLACEMENT

150084

OCT 31 2016

DAS
6
9-89

Location

Loc Qty

Loc Code

ST315

5

149712

4

m128051

1

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐																																																													
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval Completed By _____ Lead hand / Supervisor Approval Verification _____ QC / QA Coordinator Approval _____																																																									
Description Work Order Deviation				Disposition																																																													
Root Cause		FAULT CATEGORY																																																															
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐	Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐	Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐	Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐	Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐	Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐	Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐	Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐	LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐	Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐	Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____			
Misidentified ☐	Past Due ☐																																																																

Picklist Print

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Page 3

Work Order ID: 150301

Parent Item: D5238-042

Parent Item Name: Maintenance Step Assembly

150301

D5238-042

Start Date: 8/22/2016

Required Date: 8/24/2016

Start Qty: 2.00

Required Qty: 2.00

MS21042L3

Purchased

No

Each

1,576.000

24

MS21042L3

Nut

135330

OCT 31 2016

DAS
6
9-89

Location

Loc Qty

Loc Code

FP001

14

m133790

14

GA

531

m134360

112

m135135

419

ST303

1031

m134039

12

m135056

7

m135135

412

m135407

600

MS24694-S54

Purchased

No

Each

90.0000

4

MS24694-S54

SCREW

135672

OCT 31 2016

DAS
6
9-89

Location

Loc Qty

Loc Code

over006

50

m134851

50

ST284

40

m135274

40

MS24694-S55

Purchased

No

Each

204.0000

16

MS24694-S55

Screw

1357667

OCT 31 2016

DAS
6
9-89

Location

Loc Qty

Loc Code

ST283

204

m134376

104

m135408

100

9

Wednesday, August 24, 2016 11:38:44 AM

Shop Packet Print

Page 3

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐																																																													
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Misidentified ☐	Past Due ☐																																																																

Picklist Print

Wednesday, August 24, 2016 11:38:44 AM

Page 4

Work Order ID: 150301

150301

Parent Item: D5238-042

D5238-042

Parent Item Name: Maintenance Step Assembly

Start Date: 8/22/2016

Required Date: 8/24/2016

Start Qty: 2.00

Required Qty: 2.00

MS24694-S56

Purchased

No

Each

40.0000

4

MS24694-S56

SCREW

OCT 31 2016

DAS
6
9-89

Location

Loc Qty

Loc Code

ST283

40

m132344

40

Each

1,122.000

24

NAS1149D0332J

Purchased

No

NAS1149D0332.J

Washer

135672

OCT 31 2016

DAS
6
9-89

Location

Loc Qty

Loc Code

CA

6

m129682

6

FP001

522

m134848

522

GA

463

m135046

463

ST264

131

m135046

131

Wednesday, August 24, 2016 11:38:44 AM

Shop Packet Print

Page 4

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

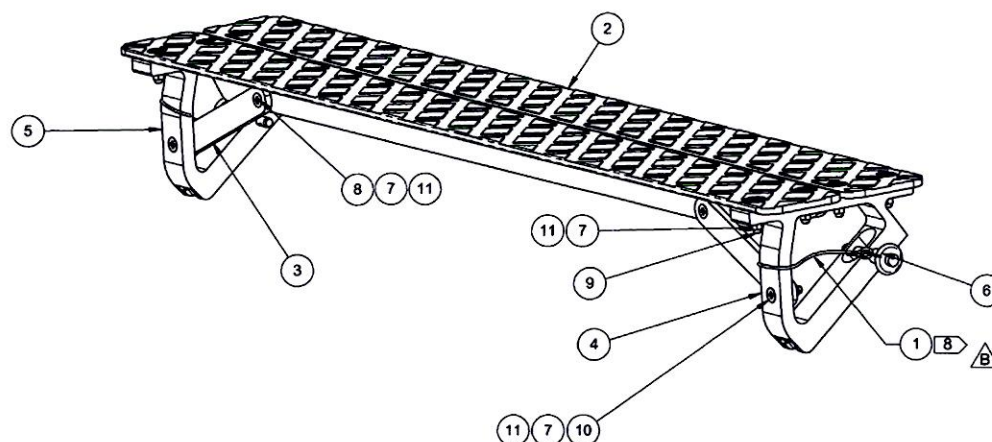


QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐																																																											
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Misidentified ☐	Past Due ☐																																																														

ITEM	QTY	P/N	DESCRIPTION
	X	D5238-041	MAINTENANCE STEP ASSEMBLY
1	2	D2690-6	LANYARD ASSEMBLY
2	2	D4092-1	MAINTENANCE STEP
3	2	D4093-5	BRACKET
4	1	D5237-5	BRACKET
5	1	D5237-7	BRACKET
6	2	MS17984-C410	PIN, QUICK RELEASE
7	12	MS21042L3	NUT, SELF-LOCKING
8	2	MS24694-S54	SCREW, CSK 100*
9	8	MS24694-S55	SCREW, CSK 100*
10	2	MS24694-S56	SCREW, CSK 100*
11	12	NAS1149D0332J	WASHER



SHOP COPY
RETURN TO
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UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 150301 MJS
160826

D5238-041 MAINTENANCE STEP ASSEMBLY

NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: PER QSI 044 6.1
- 7) WEIGHT: 5.00 lbs
- 8) ASSEMBLE D2690-6 LANYARD ABOVE D4093-5 BRACKET

RELEASED
2015-12-07
ECN 15-649

APPROVED

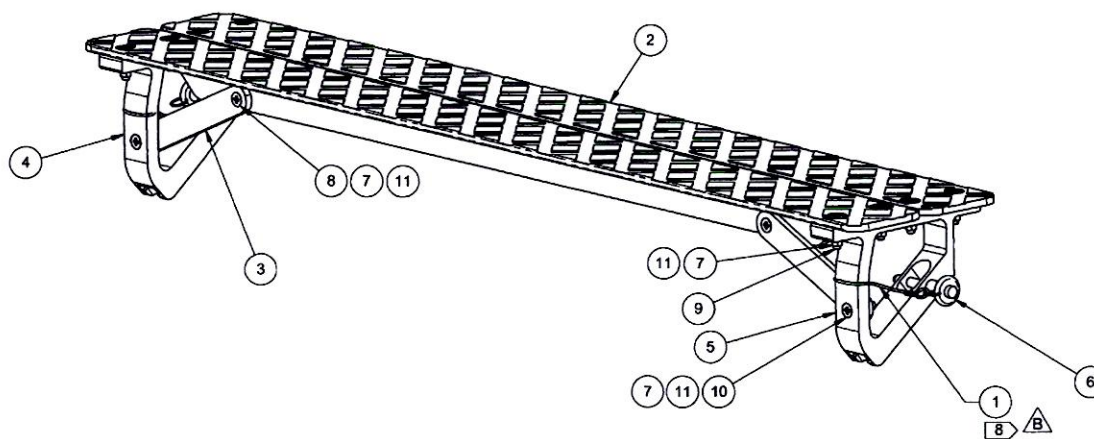
B	REVISE LANYARD LOCATION, ZN B2-1, B2-2, A8-1, A8-2	VS	15.10.16
A	NEW ISSUE	VS	15.04.06
REV.	DESCRIPTION	BY	DATE
DESIGN	VS		
DRAWN	VS		
CHECKED	RF		
MFG. APPR.	JLM		
APPROVED	HS		
DE APPR.	DS		
DATE	15.10.16		

DART AEROSPACE LTD
HAWKESBURY, ONTARIO, CANADA

DRAWING NO. D5238
REV. B
SHEET 1 OF 6
TITLE MAINTENANCE STEP ASSY
SCALE NTS

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WRITTEN PERMISSION FROM DART AEROSPACE LTD.

ITEM	QTY -042	P/N	DESCRIPTION
	X	D5238-042	MAINTENANCE STEP ASSEMBLY
1	2	D2690-6	LANYARD ASSEMBLY
2	2	D4092-1	MAINTENANCE STEP
3	2	D4093-5	BRACKET
4	1	D5237-5	BRACKET
5	1	D5237-7	BRACKET
6	2	MS17984-C410	PIN, QUICK RELEASE
7	12	MS21042L3	NUT, SELF-LOCKING
8	2	MS24694-S54	SCREW, CSK 100*
9	8	MS24694-S55	SCREW, CSK 100*
10	2	MS24694-S56	SCREW, CSK 100*
11	12	NAS1149D0332J	WASHER



D5238-042 MAINTENANCE STEP ASSY

NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: PER QSI 044 6.1
- 7) WEIGHT: 5.00 lbs
- 8) ASSEMBLE D2690-6 LANYARD ABOVE D4093-5 BRACKET



RELEASED
2015-12-07

APPROVED

DESIGN	VS	DART AEROSPACE LTD	
DRAWN	VS	HAWKESBURY, ONTARIO, CANADA	
CHECKED	RF	DRAWING NO.	REV. B
MFG. APPR.	JLM	D5238	SHEET 2 OF 6
APPROVED	HS	TITLE	SCALE
DE APPR.	DS	MAINTENANCE STEP ASSY	NTS
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8 7 6 5 4 3 2 1

D

D

C

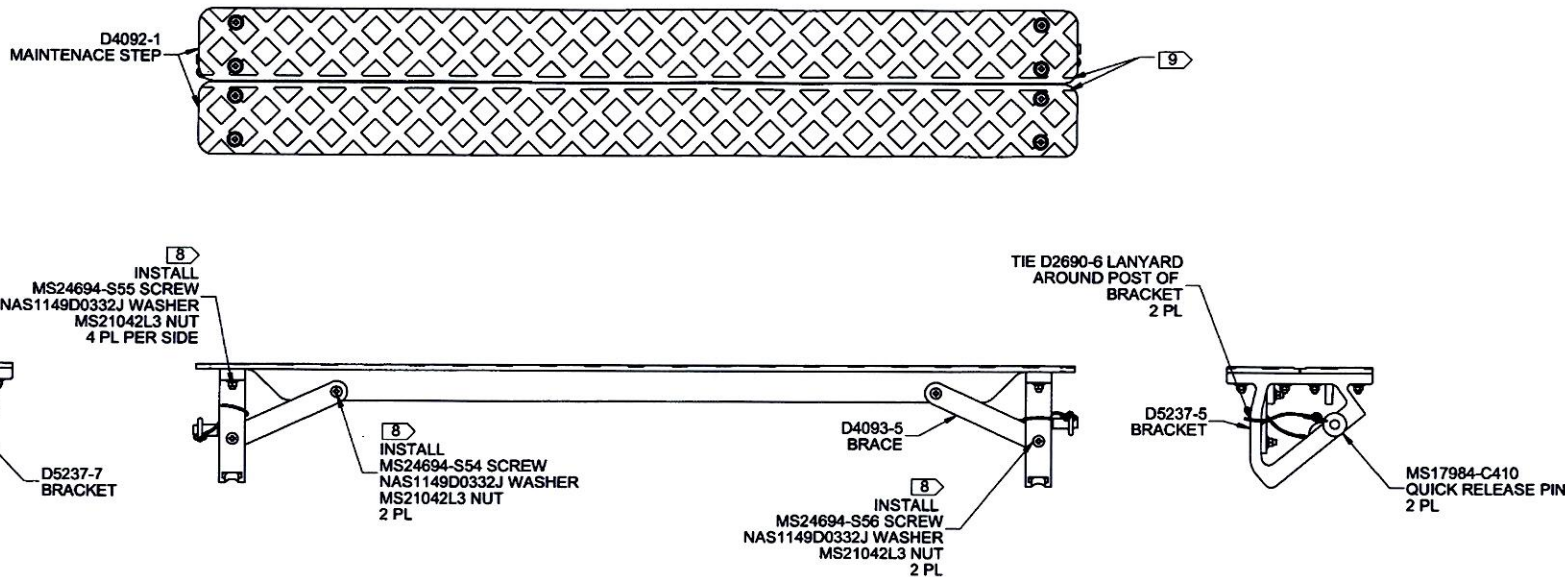
C

B

B

A

A



D5238-041 MAINTENANCE STEP ASSEMBLY

NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: PER QSI 044 6.1
- 7) WEIGHT: 5.00 lbs
- 8) TORQUE SCREWS UP TO 15-25 in-lb (1.7-2.8 N-m)
- 9) GRIP CUTOUT TOWARD CENTER

RELEASED
2015-12-07

APPROVED

DESIGN	VS	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	VS	DRAWING NO.	REV. B
CHECKED	RF	D5238	SHEET 3 OF 6
MFG. APPR.	JLM	TITLE	SCALE
APPROVED	HS	MAINTENANCE STEP ASSY	NTS
DE APPR.	DS	COPYRIGHT © 2015 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	
DATE	15.10.16		

8 7 6 5 4 3 2 1

D4092-1
MAINTENANCE STEP

8
INSTALL
MS24694-S55 SCREW
NAS1149D0332J WASHER
MS21042L3 NUT
4 PL PER SIDE

D5237-5
BRACKET

D4093-5
BRACE

8
INSTALL
MS24694-S54 SCREW
NAS1149D0332J WASHER
MS21042L3 NUT
2 PL

TIE D2890-6 LANYARD
AROUND POST OF
BRACKET
2 PL

D5237-7
BRACKET

MS17984-C410
QUICK RELEASE PIN
2 PL

8
INSTALL
MS24694-S56 SCREW
NAS1149D0332J WASHER
MS21042L3 NUT
2 PL

D5238-042 MAINTENANCE STEP ASSY

NOTES:

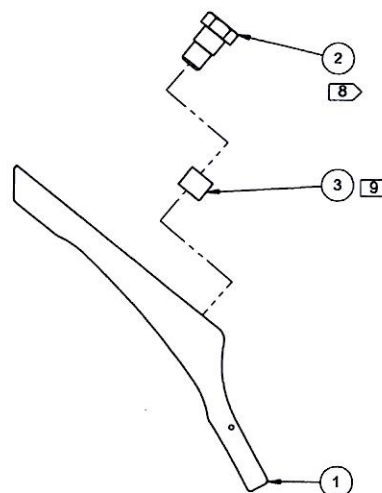
- 1) MATERIAL: N/A
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: PER QSI 044 6.1
- 7) WEIGHT: 5.00 lbs
- 8) TORQUE SCREWS UP TO 15-25 in-lb (1.7-2.8 N-m)
- 9) GRIP CUTOUT TOWARD CENTER

RELEASED
2015-12-07

APPROVED

DESIGN	VS	DART AEROSPACE LTD	
DRAWN	VS	HAWKESBURY, ONTARIO, CANADA	
CHECKED	RF	DRAWING NO.	REV. B
MFG. APPR.	JLM	D5238	SHEET 4 OF 6
APPROVED	HS	TITLE	SCALE
DE APPR.	DS	MAINTENANCE STEP ASSY	NTS
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ITEM	QTY	P/N	DESCRIPTION
	X	D5238-043	LOWER BRACKET, AFT
1	1	D5237-1	BRACKET
2	1	D5245-5	MOUNTING BOLT
3	1	MS21209F6-10	HELI-COIL, LOCKING



D5238-043 LOWER BRACKET, AFT

NOTES:

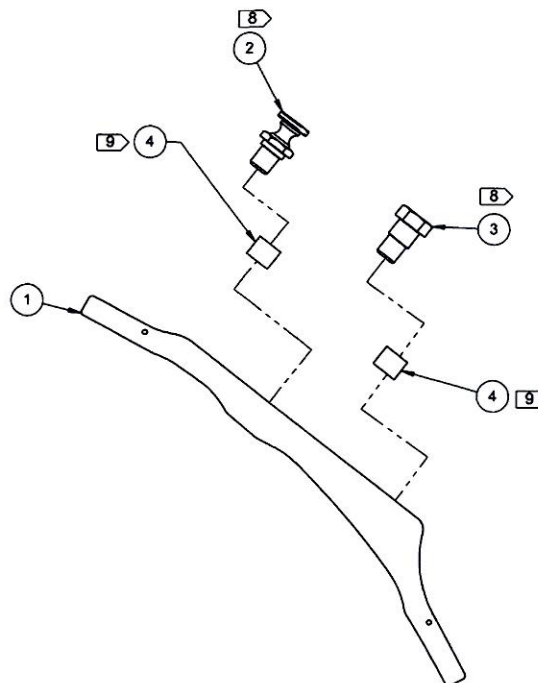
- 1) MATERIAL: N/A
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: PER QSI 044 6.1
- 7) WEIGHT: 0.35 lbs
- 8) TORQUE UP TO 160-190 in-lb (18.1-21.5 N-m)
- 9) INSTALL FLUSH WITH SURFACE, MAX 0.030" DEEP

RELEASED
2015-12-07

APPROVED

DESIGN	VS	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	VS		
CHECKED	RF	DRAWING NO.	REV. B
MFG. APPR.	JLM	D5238	SHEET 5 OF 6
APPROVED	HS	TITLE	SCALE
DE APPR.	DS	MAINTENANCE STEP ASS'Y	NTS
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ITEM	QTY	P/N	DESCRIPTION
	X	D5238-045	LOWER BRACKET, FWD
1	1	D5237-3	BRACKET
2	1	D5245-3	MOUNTING BOLT
3	1	D5245-5	MOUNTING BOLT
4	2	MS21209F6-10	HELI-COIL, LOCKING



D5238-045 LOWER BRACKET, FWD

NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: PER QSI 044 6.1
- 7) WEIGHT: 0.52 lbs
- 8) TORQUE UP TO 160-190 in-lb (18.1-21.5 N-m)
- 9) INSTALL FLUSH WITH SURFACE, MAX 0.030" DEEP

RELEASED
2015-12-07

APPROVED

DESIGN	VS	DART AEROSPACE LTD	
DRAWN	VS	HAWKESBURY, ONTARIO, CANADA	
CHECKED	RF	DRAWING NO.	REV. B
MFG. APPR.	JLM	D5238	SHEET 6 OF 6
APPROVED	HS	TITLE	SCALE
DE APPR.	DS	MAINTENANCE STEP ASS'Y	NTS
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